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HOUSEKEEPERS' CHAT

Friday, August 16, 1935

(FOR BROADCAST USE ONLY)

Subject: "CANNING CORN." Information from the Bureau of Home Economics, U.S.D.A.

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I don't pretend to be an authority on national affirs, but the more letters I read from the country's homemakers these days, the more I wonder if the greatest American problem at present isn't the corn-canning problem. Certainly this problem is affecting plenty of good citizens. From all reports, the army of home canners is increasing every day. And from the letters they write, I gather that they're divided in opposite camps as to the best method of putting up their sweet corn. On one front the army believes in canning corn "cream-style." And on the other front, they hold for canning corn in the whole grain. Both armies seem to want a court of arbitration to decide the best method.

Well, first a few general facts about canning corn. Corn happens to be one of the more difficult vegetables to can. Far too many people report spoilage each year. For one thing, corn is a non-acid food, and all non-acid foods have to be canned under steam pressure. You can't be sure of sterilizing them in a hot-water bath. Then, it's one of the more dense vegetables which makes it hard for heat to penetrate it.

Now, when you prepare corn cream style, you cut it from the cob so that it makes an especially dense pack. Naturally, when you take a sharp knife and slice off the tops of the kernels on an ear of corn, and then scrape the cob with the back of the knife, you'll get a soft, thick, pasty material. Then, you process it in the steam pressure canner. The pressure gauge on the canner should register 15 pounds pressure, which means that you'll have a temperature of 250 degrees Fahrenheit inside the canner. But even this intense heat is slow to penetrate the corn inside the containers, especially if it is in glass jars. And that corn will have to be heated to this high temperature all through the jar and keep this heat for a long time, before all the spoilage bacteria in it are sure to die.

The bacteriologists have that all worked out. They know exactly how many degrees of heat it takes for just how many minutes to kill the bacteria in corn and other foods during canning. They run delicate instruments, called thermocouples, down into the jars while they are in the canner and keep records on how the heat gradually works its way toward the center. If we had television, I'd like to show you how the bacteriologists plot these records into time-temperature curves, because they show very clearly what happens inside a jar of corn during canning.

Now, since we're on the subject of heat in cream-style canning, I'd like to answer one question that homemakers frequently ask about it. They want to know why cream style corn so often turns brown during canning. One Pennsylvania homemaker wrote to the Bureau of Home Economics: "My cream-style corn tastesall right, but I don't like the way it looks."

She had sized up the situation correctly. The brown color didn't mean that the corn had spoiled. It was just that the intense heat of the canner had caramelized the sugar in the corn. You know the way sugar turns brown when you put it over a hot fire and make it into caramel flavoring. Corn canned in glass is more likely to caramelize and turn brown than if canned in tin. Tin is a better conductor of heat than glass so you don't have to process your tin cans of corn as long as you do glass jars. And you can pop your cans into cold water as soon as you take them out of the canner. The jars have to cool off gradually so the corn naturally stays hot longer.

So much for the facts of cream-style canning of corn. Now about the whole-grain style. Here you cook corn on the cob first, for 4 or 5 minutes. That's to set the starch in the kernels. Then you take a sharp knife and cut off the kernels as close to the cob as you can without getting the tough hulls. Don't scrape the cobs.

Now heat the corn to boiling with half as much boiling water as you have corn -- by weight. Add sugar and salt to season. Pack the corn boiling hot into the hot sterilized containers. Put these containers into the steam pressure canner at once and process them at 10 pounds pressure or 240 degrees, for the number of minutes your time-table says.

With this whole-grain pack, the liquid circulates more freely through the corn and it heats more quickly to the center of the can or jar. People who have studied and experimented with these two different methods of canning corn believe that there would be a good deal less spoilage in home-canned corn if everybody would use the whole-grain method.

There are the facts of cream-style versus whole-grain canning of corn. But you can have even more details of methods and temperature and pressure, if you get a reliable canning guide. If you haven't a copy of the Department of Agriculture bulletin on the subject, it's not too late to send for one. This is called "Canning Fruits and Vegetables at Home." It's number is 1471, and it's yours for the asking. All you have to do to get a copy is to write to the Department of Agriculture at Washington, D. C., and ask for Farmers' Bulletin No. 1471 -- Canning Fruits and Vegetables at Home. Copies are free as long as the supply lasts.

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